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May 15th.

MR. LEA, President, in the Chair.

Fifty-three members present.

The following papers were presented for publication :

"Description of a new species of *Marginella*," by John H. Redfield.

"Descriptions of new organic remains from the Tertiary, Cretaceous and Jurassic rocks of Nebraska," by F. B. Meek and F. V. Hayden.

And were referred to Committees.

Dr. Fisher read the following extract of a letter from Mr. J. H. Redfield :

"Mr. J. R. Willis announces that he has discovered, in deep water off the coast of Nova Scotia, small specimens of the *Waldheimia cranium*, hitherto known only from Northern Europe. He has also found *Littorina litorea* abundant upon the rocky shore near Halifax, the specimens being perfectly undistinguishable from English examples."

Prof. R. E. Rogers exhibited a modification of Mr. Gore's apparatus of the metallic ball revolving in a circle under the influence of a galvanic current.

The apparatus consists of two bands of sheet brass, secured parallel and within an inch and a half of each other, upon the edge of a board, so as to form a miniature railway, on which the ball may rest.

To give automatic action to the ball, causing it to transverse the rails alternately to and fro, the ends of the bands are bent slightly upwards. By this arrangement, the ball, on approaching the end of its course in one direction, is carried by its momentum a little up the inclination, but gravity soon prevailing, its motion is reversed, and continues in its new direction until the same result takes place at the other end.

The death of Bernard Henry, M. D., who died at sea on the 15th April, was announced.

On motion of Mr. Vaux, the following resolution was unanimously adopted :

*Resolved*, That the thanks of this Society be presented to H. G. De-silver, for the valuable addition to its collection of the fine specimen of the Moose presented this evening.

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May 22nd.

Vice President BRIDGES in the Chair.

Forty-four members present.

The following papers were presented for publication.

"Catalogue of Birds collected during a survey of a route for a ship canal across the Isthmus of Darien, by order of the Government of the United States, made by Lieut. N. Michler, U. S. Top. Eng., with notes and descriptions of new species," No. 2, by John Cassin.

"Descriptions of some new species of Cretaceous Fossils from South America, in the collection of the Academy, by Wm. M. Gabb.

"Descriptions of 14 new species of *Schizostoma*, *Anculosa*, and *Lithasia*," by Isaac Lea.

And were referred to Committees.

[May,

Mr. Aubrey H. Smith remarked, that a few days since, whilst he and another member of the Academy were crossing a sandy bank, partially covered with low bushy pine trees and other undergrowth, near Moorestown, N. J., they came across a black snake of about four feet in length, lying near the edge of the cover formed by the bushes. At the first alarm, the animal, instead of escaping along the ground, into the shelter so close at hand, immediately, with a rapid gliding motion, ascended among the branches of the pines, and reaching their somewhat flattened tops, pressed along from one of them to the other at the height of some six or seven feet from the ground, and finally rested at length among the horizontal upper branches. The ascent was made by him in a direction almost perpendicular, solely by projecting the body upward from the ground to the lower branches of the trees, and from them as from a new point of support, to those next higher, not deriving any aid from the upright trunk of the tree, which he did not seem even to touch. When again disturbed by our approach, he did not descend, but retreated with the same gliding motion along the top of the pines. It was not till actually seized by the hand, that, on his release, he betook himself to flight along the ground.

Mr. Lea called the attention of the members to two very remarkable specimens of *Echinus*, perforating rocks, which he had recently received from Mr. Cailliaud, of Nantes, the Egyptian traveller. He also exhibited a specimen of Sandstone from Payta in Peru, which contained *Petricola*, *Lithophagus*, &c. He reminded the members that he had presented to the Academy a very remarkable specimen, which he had received about two years since from Mr. Cailliaud, being a mass of *gneiss* which had been perforated by *Pholades*. When Mr. Cailliaud, who had advocated, contrary to the opinion of most naturalists, the theory that some of the Molluscs bored the rocks by friction and not by decomposition, found that *gneiss* and *granite* and other *silicious rocks* were penetrated by them, he entirely settled that question, for there are no acids known which will decompose siliceous rocks. Mr. Lea remarked that the two specimens now on the table were still more remarkable. The smaller one consisted of two specimens of *Echinus lividus*, Lam., which had buried themselves in the solid *granite*, one of them having made a circular hole  $1\frac{1}{2}$  inch deep, and 2 inches wide. This specimen came from the granite coast of the Loire-Inférieure. The second specimen consisted of quite a congress of individuals of the same species, imbedded in a solid mass of hard *Silurian Sandstone*, from the Bay of Douarnenez, in the Department of Finistère. In this beautiful specimen there are five individuals nestled in their circular holes, worked out in this hard stone by the attrition of their teeth, and there are three holes vacated. The specimen is 5 inches by  $6\frac{1}{2}$ , and there being eight holes in all, their circumferences nearly impinge on each other. Mr. Cailliaud is entirely satisfied that the boring is purely mechanical, that the five teeth are the instruments of exploitation, and that it is by the percussion of their points on the rocks that these holes are effected. The teeth are in form like the rodents, and constantly increase as worn at the outer extremity. He made a hole five millimetres deep and forty in circumference with a bundle of the teeth in an hour. One of the colonies which he examined was in a bay, and contained about two thousand holes, each one filled, and at low water they were but a short distance below the surface. Some of the specimens were not larger than a pea, and probably only five days old. The holes were not all made by the present occupants, most of them probably being very old and having successive inhabitants. Mr. Cailliaud mentioned in his letter to Mr. Lea that he shortly expected to receive from Guadeloupe an oval *Echinus* which had made its oval hole in the mass of *Madréporite*.

Dr. I. I. Hayes stated to the Academy, that his success in New York and Boston, in raising funds for his proposed Arctic Expedition, 1860.]

had been so great, that if he could succeed in raising \$6000 in this city he would be able to sail this year.

May 29th.

Mr. LEA, President in the Chair.

Thirty-eight members present.

The report of the Biological Department was presented.

The following resolution, presented by Dr. Leidy on behalf of the Curators, was adopted,

*Resolved*, That the Publication Committee and the Committee on Proceedings, be authorized to exchange as much of the Journal and Proceedings of the Academy as can be spared, for the suite of Palæozoic fossils, which have been offered by Mr. J. N. H. Barris.

The following papers were, on the report of the Committees to whom they had been referred, ordered to be published in the Proceedings.

#### Notes on American Land Shells. No. 6.

BY W. G. BINNEY.

The Catalogue of the Terrestrial Mollusks of North America, commenced in the Proceedings of the Academy for November, 1858, and continued in the number for July, 1859, is here completed. The list is believed to contain all the species described as inhabiting Mexico. I have followed the systematic arrangement of Drs. Gray and Pfeiffer in grouping the genera, and the decisions of the latter in regard to the synonymy.

Many Central American species will undoubtedly be added to the list when their geographical range is better known. The species of the Pacific coast, included in the first section of the Catalogue, are omitted here, viz.: Nos. 3, 7, 8, 11, 23, 25, 35, 37, 39, 40, 41, 42, 43, 45, 46, 47.

For additional species, changes of nomenclature, &c., &c., of the section of the United States, see Boston Journal of Natural History, vol. vii., and the Remarks on North American Helicidæ by Mr. T. Bland, in Annals of New York Lyceum of Natural History, vol. vi.

##### FAMILIA TESTACELLIDÆ.

##### GLANDINA.

248. *G. candida* (*Achatina*) Shuttl.,  
Pf. (olim.)

*Oleacina candida* Gr. et Pf., Pf.

249. *G. Carminensis* Mor., Ads.  
Gen.

*Achatina Carminensis* Desh. in  
Fer., Pf. (olim.)

" *rosea* var. Rve. (46 b.)

*Oleacina Carminensis* Gr. et Pf.,  
Pf.

250. *G. conularis* (*Oleacina*) Pf.

*Achatina conularis* Pf. (olim.)

251. *G. Cordovana* (*Oleacina*) Pf.  
*Achatina Cordovana* Pf. (olim.)

252. *G. corneola* W. G. Binn. vid.  
202.

252a. *G. delicatula* (*Achatina*)  
Shuttl., Pf. (olim.)

*Oleacina delicatula* Gr. et Pf., Pf.

253. *G. Ghiesbreghti* (*Achatina*)  
Pf. (olim.)

*Oleacina Ghiesbreghti* Pf.

253a. *G. indusiata* Pf.

254. *G. Isabellina* (*Achatina*) Pf.  
(olim.), Rve.

*Oleacina Isabellina* Gr. et Pf., Pf.

255. *G. Liebmanni* (*Achatina*) Pf.  
(olim.), Chemn.

*Achatina striata* Rve. (19.)

*Oleacina Liebmanni* Gr. et Pf., Pf.

[May,